

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: NEO-RAY

Report Number: P332176-830

Luminaire Tested: **S123DIW-S775D1535U830-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332176-830
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-5,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DIW-S775D1535U830-4F0-1E-UDD-D
Description: DEFINE 3 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 775 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1535 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8833.7 lumens
Efficiency: N/A
Efficacy: 129.7 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.37
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4' x H: 0.08')
CIE Type: Semi-Indirect

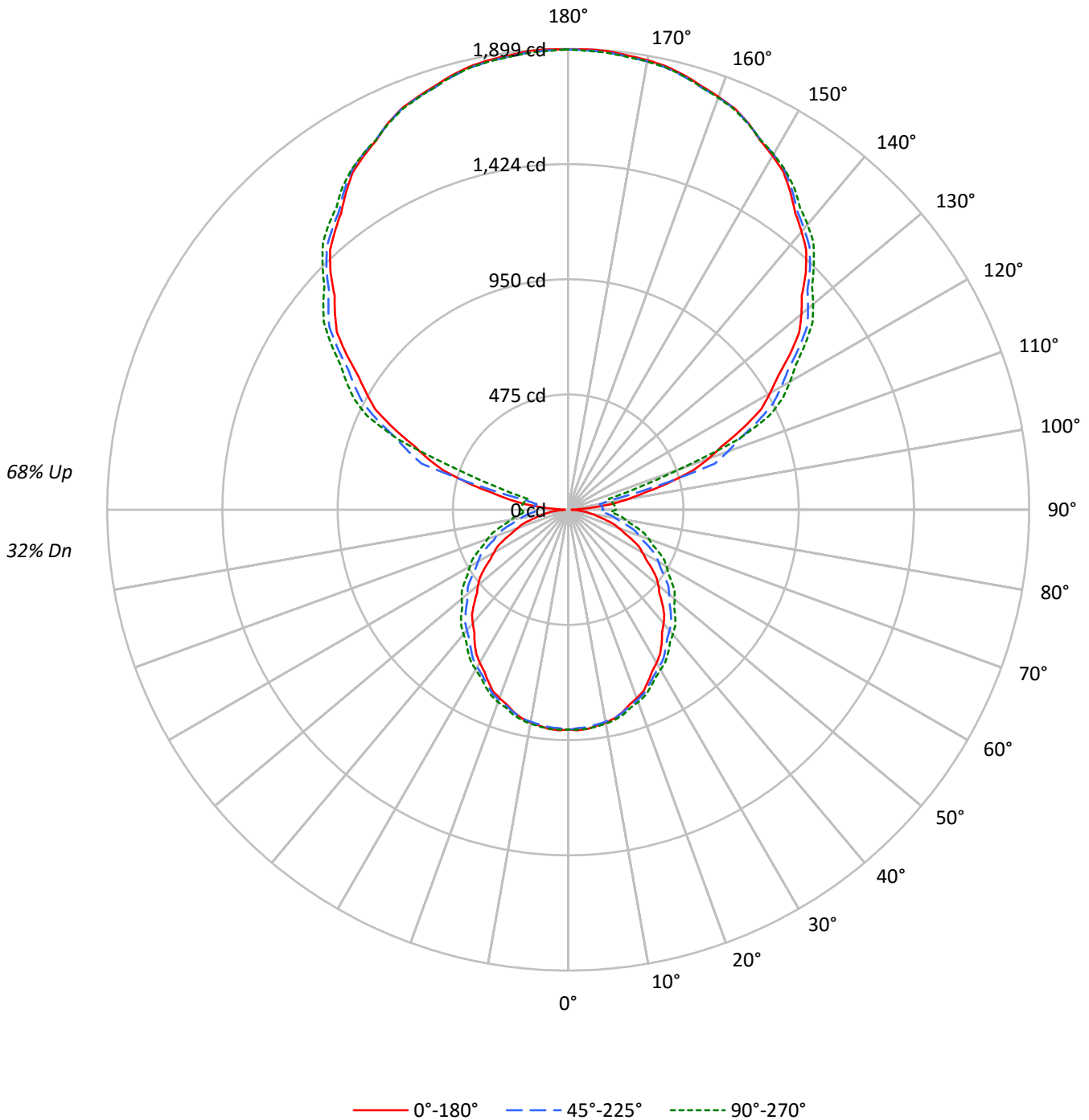
Input Watts (W): 68.1
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





TEST NUMBER: P332176-830

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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20	
RC	80				70				50				30				10	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	103	103	103	103	92	92	92	92	73	73	73	55	55	55	39	39	39	32
1	93	88	84	81	83	80	76	73	63	61	58	48	46	45	34	33	32	25
2	84	77	71	65	75	69	64	59	55	51	48	41	39	37	29	28	26	21
3	77	67	60	54	69	61	54	49	48	44	40	36	33	31	26	24	22	17
4	70	59	51	45	63	53	47	41	42	38	34	32	29	26	23	21	19	15
5	64	53	45	39	57	48	41	35	38	33	29	29	25	22	20	18	16	13
6	59	47	39	33	53	42	36	30	34	29	25	26	22	19	18	16	14	11
7	54	42	34	29	49	38	31	27	31	26	22	23	20	17	17	14	13	10
8	50	38	31	25	45	35	28	23	28	23	19	21	18	15	15	13	11	9
9	47	35	27	22	42	32	25	21	25	20	17	20	16	13	14	12	10	8
10	44	32	25	20	39	29	23	18	23	19	15	18	15	12	13	11	9	7

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9752	9752	9752
5°	9782	9507	9512
10°	9694	9287	9240
15°	9570	9038	8945
20°	9390	8755	8621
25°	9171	8428	8278
30°	8945	8133	7931
35°	8692	7823	7655
40°	8450	7540	7358
45°	8182	7269	7122
50°	7918	7000	6860
55°	7627	6725	6625
60°	7343	6446	6385
65°	7051	6149	6098
70°	6611	5815	5805
75°	6055	5432	5506
80°	5416	5056	5164
85°	4828	4799	4966



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	85.9	1.0
10°-20°	244.8	2.8
20°-30°	366.2	4.1
30°-40°	437.3	5.0
40°-50°	457.5	5.2
50°-60°	429.4	4.9
60°-70°	358.6	4.1
70°-80°	256.6	2.9
80°-90°	158.3	1.8
90°-100°	165.0	1.9
100°-110°	399.2	4.5
110°-120°	836.5	9.5
120°-130°	1032.1	11.7
130°-140°	1086.1	12.3
140°-150°	1006.9	11.4
150°-160°	810.2	9.2
160°-170°	522.9	5.9
170°-180°	180.2	2.0
0°-30°	696.9	7.9
0°-40°	1134.2	12.8
0°-60°	2021.1	22.9
0°-90°	2794.6	31.6
90°-120°	1400.7	15.9
90°-150°	4525.9	51.2
90°-180°	6039.0	68.4
0°-180°	8833.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	906	906	906	906	906	
5°	907	905	899	906	906	86
15°	864	866	866	875	874	243
25°	780	789	792	805	805	359
35°	671	687	700	714	718	420
45°	549	572	597	615	624	423
55°	418	451	486	512	521	375
65°	289	328	371	400	411	286
75°	157	203	253	284	297	168
85°	48	98	150	182	193	51
90°	14	77	145	183	197	13
95°	97	82	141	180	192	115
105°	428	460	383	174	173	453
115°	793	814	861	898	912	782
125°	1113	1126	1159	1182	1192	994
135°	1384	1392	1408	1429	1431	1065
145°	1596	1605	1608	1618	1622	999
155°	1757	1754	1756	1762	1754	809
165°	1853	1849	1847	1857	1849	523
175°	1897	1890	1891	1900	1890	180
180°	1897	1897	1897	1897	1897	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	906.0	906.0	906.0	906.0	906.0	906.0	906.0	906.0	906.0	906.0	906.0
2.5°	909.9	909.4	908.9	908.3	907.9	906.8	905.5	904.1	902.7	901.3	902.7
5°	907.0	906.5	906.1	905.7	905.2	904.4	903.1	901.7	900.4	899.1	900.9
7.5°	898.1	898.1	898.2	898.3	898.4	897.9	896.5	895.3	894.0	892.8	894.9
10°	890.2	890.6	891.1	891.6	891.9	891.6	890.5	889.5	888.3	887.2	889.5
12.5°	880.7	881.4	881.9	882.6	883.2	883.2	882.4	881.7	880.9	880.1	882.1
15°	863.6	864.2	864.9	865.5	866.2	866.4	866.2	866.0	865.7	865.5	867.7
17.5°	841.9	843.2	844.5	845.7	847.1	847.7	847.6	847.5	847.4	847.3	849.3
20°	826.0	827.4	828.7	830.0	831.3	832.2	832.6	833.1	833.5	834.0	835.9
22.5°	809.5	810.8	812.1	813.4	814.7	815.7	816.3	816.9	817.6	818.1	820.7
25°	779.7	781.8	784.0	786.3	788.4	789.9	790.5	791.2	791.8	792.5	795.3
27.5°	749.7	752.1	754.7	757.1	759.7	761.6	763.0	764.4	765.8	767.2	769.7
30°	728.3	731.2	734.1	736.9	739.7	742.1	743.8	745.6	747.3	749.0	751.7
32.5°	704.6	707.8	711.1	714.3	717.5	720.2	722.5	724.8	727.1	729.3	732.2
35°	671.1	674.6	678.2	681.6	685.1	688.3	691.2	694.0	696.9	699.7	703.0
37.5°	635.6	639.5	643.5	647.4	651.4	655.1	658.6	662.1	665.6	669.1	672.9
40°	611.9	615.9	619.8	623.8	627.6	631.9	636.2	640.6	645.0	649.4	653.1
42.5°	585.8	590.7	595.5	600.3	605.1	609.8	614.3	619.0	623.5	628.1	632.2
45°	548.7	554.0	559.2	564.5	569.8	575.1	580.6	586.1	591.6	597.1	601.2
47.5°	509.8	515.9	521.8	527.7	533.7	539.8	546.1	552.3	558.6	564.9	569.6
50°	484.6	490.7	496.8	503.0	509.2	515.6	522.5	529.2	536.0	542.8	547.8
52.5°	457.7	464.2	470.7	477.2	483.7	490.7	498.2	505.7	513.2	520.7	525.9
55°	418.5	425.7	432.9	440.2	447.4	455.0	462.9	470.8	478.6	486.5	492.5
57.5°	380.1	387.7	395.2	402.7	410.4	418.4	427.1	435.7	444.3	453.0	458.9
60°	353.4	361.2	369.1	377.0	384.9	393.3	402.4	411.3	420.3	429.3	435.5
62.5°	328.0	336.1	344.2	352.2	360.3	369.1	378.6	388.1	397.7	407.2	413.3
65°	289.2	297.7	306.2	314.8	323.4	332.4	342.1	351.8	361.5	371.1	377.7
67.5°	249.7	258.7	267.9	276.9	286.0	295.5	305.3	315.1	324.9	334.8	342.0
70°	222.1	231.5	240.9	250.3	259.8	269.8	280.3	290.8	301.3	311.9	318.9
72.5°	196.8	206.2	215.7	225.1	234.5	244.7	255.5	266.5	277.3	288.1	295.4
75°	156.9	167.2	177.6	187.8	198.1	208.8	219.7	230.7	241.7	252.7	259.9
77.5°	122.2	132.6	143.0	153.4	163.7	174.5	185.6	196.6	207.6	218.7	226.3
80°	97.7	108.5	119.2	130.0	140.7	151.7	163.2	174.6	186.0	197.4	204.8
82.5°	76.3	87.3	98.2	109.1	120.1	131.3	142.9	154.5	166.1	177.7	185.1
85°	48.4	59.3	70.3	81.2	92.2	103.5	115.2	126.8	138.4	150.1	157.5
87.5°	26.6	38.1	49.7	61.2	72.8	84.5	96.5	108.5	120.5	132.5	140.3
90°	14.2	28.1	42.0	55.9	69.7	84.4	99.5	114.8	130.1	145.3	154.0
92.5°	38.3	47.0	55.9	64.7	73.5	84.9	99.1	113.1	127.2	141.3	150.5
95°	96.8	92.6	88.2	84.0	79.6	84.6	98.8	113.0	127.1	141.4	150.3
97.5°	182.4	184.4	186.3	188.3	190.3	185.1	172.9	160.5	148.3	136.0	145.1
100°	247.0	260.3	273.6	286.8	300.1	287.4	248.6	209.9	171.2	132.3	141.2
102.5°	320.7	331.5	342.2	353.1	363.9	347.6	304.2	260.7	217.3	173.8	172.3
105°	427.8	436.5	445.3	453.9	462.6	457.6	438.8	420.1	401.3	382.6	333.3
107.5°	539.9	547.1	554.4	561.6	568.8	579.1	592.6	606.0	619.3	632.7	597.9
110°	614.6	621.1	627.5	634.0	640.5	649.8	662.0	674.2	686.5	698.7	694.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	686.8	692.3	697.8	703.3	708.8	717.5	729.3	741.2	753.1	765.0	770.6
115°	792.6	797.1	801.6	806.2	810.7	818.2	829.0	839.7	850.4	861.1	869.5
117.5°	895.9	899.8	903.7	907.7	911.6	918.0	926.9	935.7	944.5	953.4	961.1
120°	959.3	963.2	967.1	971.0	975.0	981.0	989.2	997.4	1005.5	1013.7	1021.2
122.5°	1024.7	1027.6	1030.5	1033.3	1036.2	1041.7	1049.8	1057.9	1065.9	1074.0	1080.6
125°	1113.3	1115.8	1118.3	1120.9	1123.3	1128.4	1136.0	1143.6	1151.2	1158.9	1164.0
127.5°	1200.1	1202.4	1204.7	1207.0	1209.3	1213.8	1220.6	1227.3	1234.1	1240.9	1246.2
130°	1254.2	1256.5	1258.8	1261.1	1263.4	1267.3	1273.0	1278.7	1284.2	1289.9	1295.3
132.5°	1305.3	1307.8	1310.2	1312.7	1315.1	1318.6	1323.1	1327.7	1332.2	1336.7	1341.9
135°	1384.3	1385.9	1387.6	1389.3	1390.9	1393.5	1397.2	1400.9	1404.6	1408.3	1413.2
137.5°	1451.7	1454.0	1456.1	1458.3	1460.6	1462.6	1464.7	1466.8	1468.9	1470.8	1475.8
140°	1496.0	1497.9	1499.8	1501.7	1503.5	1505.2	1506.8	1508.4	1510.0	1511.6	1516.2
142.5°	1537.8	1539.5	1541.2	1542.8	1544.5	1546.0	1547.0	1548.0	1549.2	1550.2	1554.2
145°	1596.1	1598.1	1600.1	1601.9	1603.9	1605.2	1605.9	1606.5	1607.1	1607.8	1610.1
147.5°	1650.0	1651.5	1652.9	1654.4	1655.8	1656.8	1657.5	1658.1	1658.7	1659.3	1660.5
150°	1683.9	1684.8	1685.7	1686.7	1687.6	1688.4	1689.0	1689.7	1690.3	1690.9	1691.5
152.5°	1714.3	1714.8	1715.1	1715.6	1716.1	1716.5	1716.8	1717.2	1717.6	1718.0	1719.1
155°	1757.1	1756.5	1755.9	1755.3	1754.6	1754.4	1754.8	1755.1	1755.4	1755.7	1757.3
157.5°	1790.4	1790.4	1790.3	1790.2	1790.2	1790.0	1789.6	1789.3	1789.0	1788.7	1790.5
160°	1810.7	1810.3	1810.1	1809.8	1809.4	1809.1	1808.8	1808.5	1808.2	1807.9	1809.8
162.5°	1829.9	1829.0	1828.2	1827.4	1826.6	1826.0	1825.7	1825.4	1825.0	1824.8	1826.9
165°	1852.9	1852.0	1851.1	1850.1	1849.2	1848.6	1848.2	1847.9	1847.7	1847.3	1849.8
167.5°	1870.9	1869.7	1868.5	1867.3	1866.0	1865.4	1865.4	1865.4	1865.4	1865.4	1867.8
170°	1881.1	1879.9	1878.6	1877.4	1876.1	1875.5	1875.5	1875.5	1875.5	1875.5	1878.0
172.5°	1887.9	1886.4	1884.9	1883.4	1881.9	1881.2	1881.5	1881.8	1882.0	1882.3	1884.8
175°	1896.6	1895.1	1893.5	1892.0	1890.4	1889.7	1890.1	1890.4	1890.6	1891.0	1893.2
177.5°	1898.8	1897.6	1896.4	1895.2	1893.9	1893.4	1893.7	1893.9	1894.1	1894.4	1896.4
180°	1896.6	1896.6	1896.6	1896.6	1896.6	1896.6	1896.6	1896.6	1896.6	1896.6	1896.6



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	906.0	906.0	906.0	906.0	906.0	906.0	906.0	906.0
2.5°	904.1	905.5	906.8	907.5	907.3	907.1	906.9	906.8
5°	902.6	904.4	906.1	906.8	906.6	906.4	906.3	906.0
7.5°	897.1	899.4	901.5	902.5	902.2	902.0	901.7	901.4
10°	891.6	893.8	896.0	896.9	896.5	896.0	895.6	895.1
12.5°	884.2	886.2	888.2	889.0	888.5	888.2	887.7	887.2
15°	869.9	872.1	874.3	875.2	875.1	874.9	874.6	874.4
17.5°	851.3	853.3	855.3	856.1	855.8	855.5	855.2	854.9
20°	837.9	839.9	841.9	842.9	843.2	843.4	843.6	843.9
22.5°	823.1	825.7	828.1	829.3	829.2	829.1	829.0	828.8
25°	798.2	801.1	803.9	805.3	805.3	805.3	805.3	805.3
27.5°	772.1	774.6	777.0	778.4	778.5	778.7	778.9	779.1
30°	754.3	757.0	759.6	760.9	760.9	760.9	760.9	760.9
32.5°	734.9	737.7	740.6	742.3	742.7	743.3	743.8	744.3
35°	706.3	709.6	712.8	715.0	715.9	716.7	717.6	718.5
37.5°	676.6	680.3	684.0	686.3	686.9	687.7	688.3	689.1
40°	656.9	660.5	664.3	666.6	667.5	668.4	669.2	670.1
42.5°	636.2	640.3	644.4	647.1	648.3	649.5	650.7	652.0
45°	605.4	609.5	613.8	616.7	618.5	620.2	622.0	623.8
47.5°	574.3	579.0	583.7	586.7	588.1	589.5	590.8	592.1
50°	552.9	557.9	563.0	566.3	567.8	569.3	570.9	572.4
52.5°	531.1	536.4	541.6	545.2	547.1	548.9	550.8	552.7
55°	498.4	504.4	510.2	514.1	515.9	517.6	519.3	521.1
57.5°	465.0	470.9	476.8	480.9	483.0	485.0	487.0	489.1
60°	441.6	447.7	453.8	458.2	460.5	463.0	465.4	467.8
62.5°	419.5	425.7	431.8	435.9	438.2	440.5	442.7	444.9
65°	384.3	390.8	397.4	401.8	404.0	406.1	408.4	410.6
67.5°	349.1	356.4	363.5	368.1	369.9	371.7	373.6	375.4
70°	325.9	332.9	340.0	344.5	346.8	348.9	351.1	353.4
72.5°	302.6	309.7	317.0	321.7	323.9	326.0	328.2	330.5
75°	267.1	274.4	281.6	286.5	289.2	291.8	294.5	297.1
77.5°	233.9	241.6	249.2	254.0	256.1	258.1	260.1	262.1
80°	212.3	219.7	227.2	232.1	234.2	236.4	238.7	240.8
82.5°	192.6	200.0	207.5	212.3	214.5	216.7	218.9	221.0
85°	164.9	172.4	179.8	184.6	186.8	189.1	191.2	193.4
87.5°	147.9	155.6	163.3	168.3	170.7	173.0	175.3	177.6
90°	162.8	171.4	180.2	186.0	188.8	191.6	194.4	197.2
92.5°	159.9	169.1	178.4	184.3	186.6	189.1	191.4	193.8
95°	159.4	168.3	177.4	182.9	185.1	187.3	189.5	191.7
97.5°	154.0	163.1	172.1	178.0	180.4	182.9	185.4	187.9
100°	150.1	158.9	167.9	173.5	176.0	178.5	181.1	183.5
102.5°	170.7	169.1	167.5	168.1	170.9	173.6	176.3	179.2
105°	284.1	234.8	185.5	162.1	164.8	167.3	169.9	172.6
107.5°	563.2	528.4	493.6	456.4	416.5	376.6	336.9	297.0
110°	689.4	684.8	680.1	656.3	613.3	570.2	527.3	484.2



TEST NUMBER: P332176-830

CATALOG NUMBER: S123DIW-S775D1535U830-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	776.4	782.1	787.8	786.9	779.4	771.8	764.3	756.8
115°	877.9	886.3	894.7	900.4	903.4	906.4	909.5	912.5
117.5°	968.8	976.6	984.3	989.2	991.1	993.1	995.0	997.0
120°	1028.8	1036.3	1044.0	1048.5	1050.0	1051.5	1053.1	1054.6
122.5°	1087.3	1093.9	1100.5	1104.8	1106.5	1108.3	1110.0	1111.8
125°	1169.3	1174.5	1179.8	1183.5	1185.6	1187.8	1190.0	1192.1
127.5°	1251.5	1256.9	1262.3	1265.4	1266.2	1267.1	1267.9	1268.8
130°	1300.7	1306.2	1311.5	1314.7	1315.3	1316.0	1316.7	1317.4
132.5°	1347.2	1352.4	1357.6	1360.6	1361.2	1361.8	1362.4	1363.0
135°	1418.1	1422.9	1427.8	1430.3	1430.5	1430.6	1430.8	1431.0
137.5°	1480.8	1485.7	1490.7	1493.5	1493.9	1494.4	1494.9	1495.3
140°	1520.8	1525.3	1529.8	1532.4	1532.9	1533.3	1533.8	1534.3
142.5°	1558.1	1562.1	1565.9	1568.1	1568.3	1568.5	1568.8	1569.0
145°	1612.5	1615.0	1617.3	1618.9	1619.8	1620.7	1621.6	1622.4
147.5°	1661.6	1662.8	1664.0	1664.2	1663.6	1662.9	1662.3	1661.6
150°	1692.1	1692.8	1693.4	1693.5	1693.0	1692.4	1692.0	1691.5
152.5°	1720.2	1721.4	1722.5	1722.3	1721.0	1719.7	1718.3	1716.9
155°	1758.9	1760.4	1762.0	1761.8	1759.9	1758.0	1756.1	1754.4
157.5°	1792.4	1794.3	1796.2	1795.9	1793.5	1791.0	1788.6	1786.1
160°	1811.7	1813.5	1815.3	1815.2	1813.0	1810.8	1808.6	1806.5
162.5°	1829.0	1831.2	1833.2	1833.3	1831.5	1829.5	1827.6	1825.6
165°	1852.3	1854.8	1857.4	1857.5	1855.3	1853.1	1850.9	1848.7
167.5°	1870.4	1872.8	1875.4	1875.4	1872.8	1870.4	1867.8	1865.4
170°	1880.5	1883.0	1885.6	1885.6	1883.0	1880.5	1878.0	1875.5
172.5°	1887.3	1889.8	1892.2	1892.2	1889.4	1886.7	1883.9	1881.1
175°	1895.4	1897.5	1899.8	1899.6	1897.1	1894.6	1892.1	1889.6
177.5°	1898.4	1900.4	1902.4	1902.1	1899.6	1897.1	1894.6	1892.2
180°	1896.6	1896.6	1896.6	1896.6	1896.6	1896.6	1896.6	1896.6

(END OF REPORT)